

Date: Monday, 6/19/2006 11:30:20 AM
User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: AFT TUBE ASSEMBLY
Job Number	: 27640		
Estimate Number	: 10699		
P.O. Number	: <i>N/A</i>	Part Number	: D3391025
This Issue	: 6/19/2006 S.O. No. : <i>N/A</i>	Drawing Number	: D3391 REV E
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: <i>N/A</i> Type : LANDING GEAR	Drawing Revision	: E
Previous Run	: 26894	Material	: <i>N/A</i>
Written By	: <i>[Signature]</i>	Due Date	: 7/20/2006
Checked & Approved By	: <i>[Signature]</i> 06.06.19	Qty:	1 Um: Each
Comment	: Est Rev B 06-02-07 ECN773 dwg rev. D EC Est Rev:C 06-03-28 Update Manufacturing Instructions JLM		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D6014090	ALUMINUM EXTRUSION
-----	----------	--------------------



Comment: Qty.: 1.0000 f(s)/Unit Total : 1.0000 f(s)

ALUMINUM EXTRUSION

Pick:

Qty	Part Number	Description	Batch
1	D6014-090	Extrusion	<u>B26546</u>

Identify as D3391-3

MS 06/08/15

2.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE
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Comment: MORI SEIKI CNC LATHE LARGE

Turn as per Folio FA599

Rev: D & Dwg D3391 Rev: E

MS 06/08/15

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

MS 06/08/16

4.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
-----	-------	--------------------------------



Comment: HAAS

1-Machine as per Folio FA 599 Rev: AA & Dwg D3391 Rev: E

2-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

3-Deburr

MS 06/08/25

W/O:		-WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg./ Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

Date: Monday, 6/19/2006 11:30:20 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 27640

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

9/26/06/08/25

9

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

En 06/08/29 X1

7.0

BENDING

BENDING MACHINE



Comment: NC Bender

Form as per Dwg D3391 Using Bend Prog 3391025

DP 6-8-29

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

BE 6-8-30

9.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill Tube as per D3391 using DT8809 (HOLES MARKED "A" ONLY)

3-Drill and c' sink wearshoe holes as per Dwg D3391 Using DT8878(Mid Tube) & DT8217 Wearplate Jig

4-C'sink holes for float bag (4 holes per side) as per Dwg D3391

5-Deburr

> DP 6-8-30

ADP 06-08-31

Tools: rill

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

7/26/09.050

11.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.1

9 m 3 06/10/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

Date: Monday, 6/19/2006 11:30:20 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 27640

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

POWDER COATING

POWDER COATING



M102 391



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

Y/L a.m. 06/11/17 X 1

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

FC 06 11 17 (1)

14.0

NAS1330C3KB166

INSERT



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

INSERT

Pick:

Qty	Part Number	Description	Batch
8	NAS1330C3KB166	Insert	18626

15.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install Inserts as per dwg

FC 06 11 17 (1)

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

FC 06 11 17

17.0

AESS10KB366

INSERT



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Insert

Pick:

Qty	Part Number	Description	Batch
14	AESS10KB366	Insert	102642

18.0

AESS10KB266

INSERT



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

INSERT

Pick:

Qty	Part Number	Description	Batch
2	AESS10KB266	Insert	17905
or NAS1330C3KB266			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: ☒ Date: 06/11/17

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

Date: Monday, 6/19/2006 11:30:21 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 27640

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

24.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Install inserts as per Dwg D3391

FC

2-Install Aft Cap as per Dwg D3391

A/R Sikaflex-241/-291

102660

Sikaflex expiry date:

02/07

FC

06

11

17

25.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

FC

06-11-17

26.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

FC 4/4/17

(1)

27.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

FC 06/11/17

Job Completion



u 06.11.17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

DART AEROSPACE LTD		Work Order:	24640
Description: Float Skidtube (412)		Part Number:	D3391-3
Inspection Dwg: D3391	Rev: 06.06.19 AKH	Page 1 of 1	

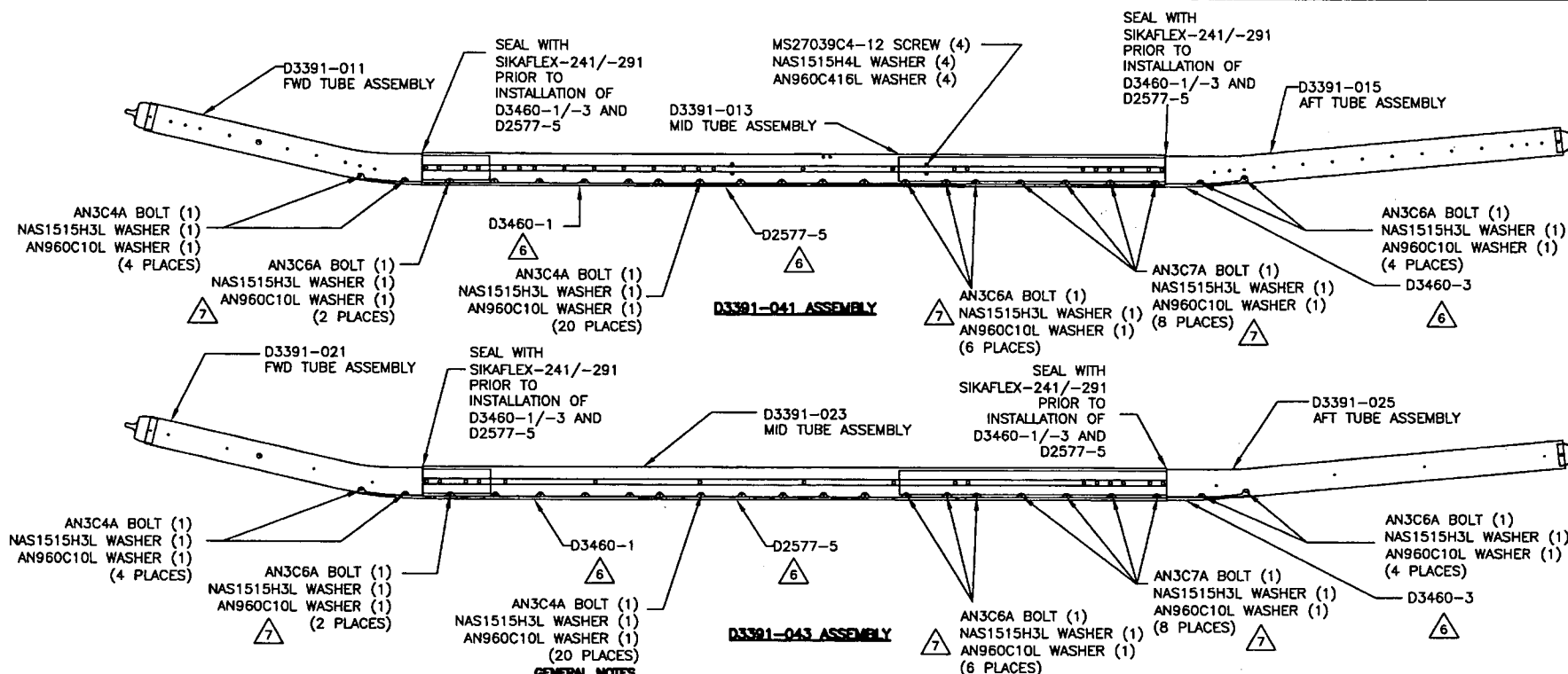
FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
14.000	+/-0.010	14.000	✓			
3.500	+/-0.010	3.492	✓			
88.93	+/-0.030	88.92	✓			
44.995	+/-0.030	45.00	✓			
3.200	+/-0.010	3.203	✓			
1.526	+0.000/-0.030	1.520	—			
0.200	+/-0.010	0.205	—			
7.500	+/-0.010	7.499	—			
27.750	+/-0.010	27.750	—			
31.750	+/-0.010	31.750	—			
35.250	+/-0.010	35.250	—			
0.400	+/-0.010	0.398	—			
0.200	+0.005/-0.001					
3.300	+/-0.010	3.303	—			
0.200	+/-0.010	0.205	—			
3.520	+/-0.010	3.523	—			
0.687	+0.010/-0.000	0.687	—			
R0.062	+/-0.010	R0.062	—			
Ø0.484	+0.005/-0.001	Ø0.484	—			

Measured by: <i>MS / BCL / ML</i>	Audited by: <i>En</i>	Prototype Approval:	N/A
Date: 06/08/16	Date: 06/08/25	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-025	KJ/JLM	<i>[Signature]</i>



GENERAL NOTES

- 1) ALL DIMENSIONS ARE IN INCHES
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 4) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL "E" SIZE HOLES (#0.250-#0.257) FOR WEARSHOE INSERTS. C/SINK #0.391/#0.425 x 100" AS APPLICABLE AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- 6) APPLY A LAYER OF SIKAFLEX -241/-291 ADHESIVE BETWEEN THE BOTTOM OF THE SKIDTUBE ASSEMBLY AND THE WEARPLATES
- 7) DO NOT TORQUE, HAND TIGHTEN ONLY

D3391-041/-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY - 041	QTY - 043	PART NUMBER	DESCRIPTION
X	X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
		D3391-043	FLOAT SKIDTUBE ASSEMBLY
1		D3391-011	FWD TUBE ASSEMBLY
1		D3391-013	MID TUBE ASSEMBLY
1		D3391-015	AFT TUBE ASSEMBLY
	1	D3391-021	FWD TUBE ASSEMBLY
	1	D3391-023	MID TUBE ASSEMBLY
	1	D3391-025	AFT TUBE ASSEMBLY
24	24	AN3C4A	BOLT
12	12	AN3C6A	BOLT
8	8	AN3C7A	BOLT
44	44	NAS1515H3L	WASHER
44	44	AN960C10L	WASHER
4		MS27039C4-12	SCREW
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER
1	1	D2577-5	WEARSHOE
1	1	D3460-1	WEARSHOE
1	1	D3460-3	WEARSHOE

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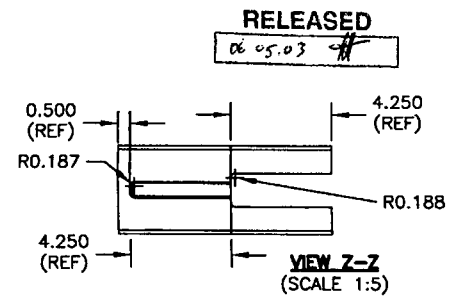
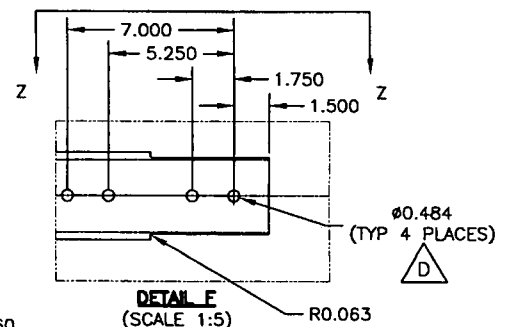
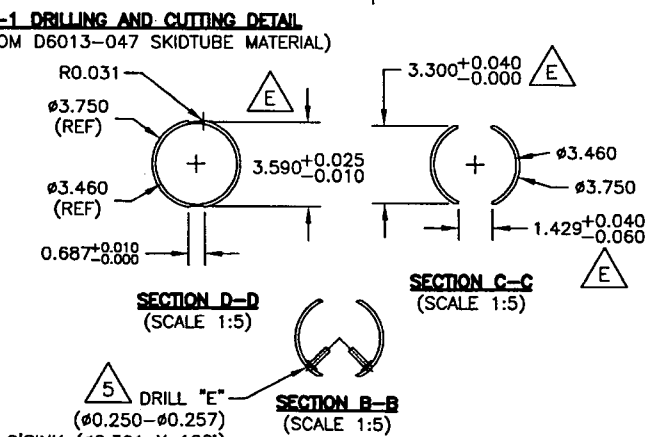
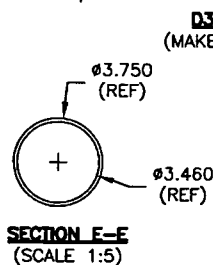
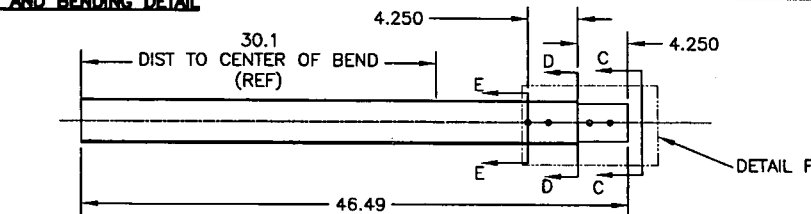
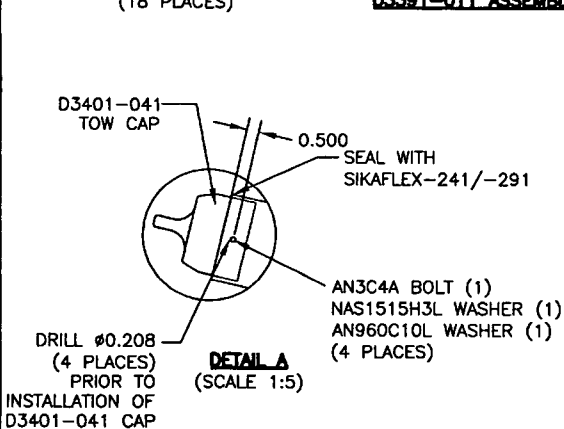
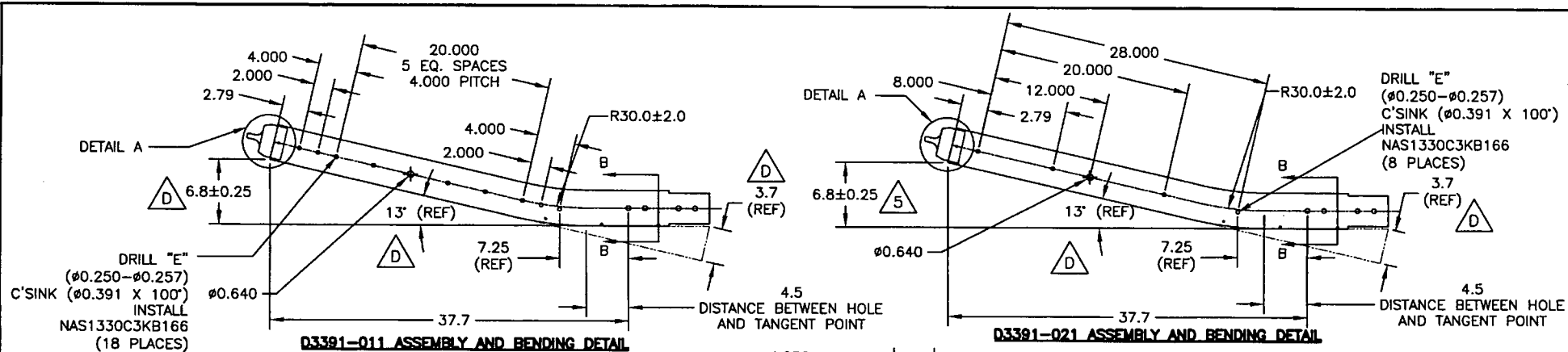
06-05-03

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E	06.04.25	CHANGE TOLERANCE, EASE MANUFACTURE
D	06.01.23	UPDATE TOLERANCE, CHANGE HOLE SIZE
C	05.09.27	LENGTHEN AFT EXTENSION
B	05.06.10	DRAWING UPDATES
A	05.02.07	NEW ISSUE
DESIGN	PH	DRAWN BY PH
CHECKED	PH	APPROVED
DATE	06.04.25	TITLE
		412 FLOAT SKIDTUBE
		SCALE
		NTS

DART DART AEROSPACE USA, INC.
 PORT HADLOCK, MA

DRAWING NO. D3391
 REV. E
 SHEET 1 OF 5

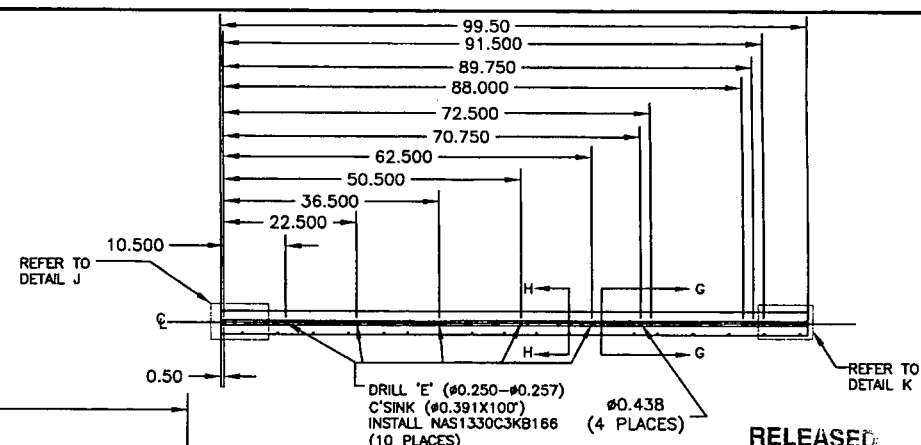


D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X	X	D3391-011	FWD TUBE ASSEMBLY
		D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
4	4	AN3C4A	BOLT
4	4	NAS1515H3L	WASHER
4	4	AN960C10L	WASHER
24	14	NAS1330C3KB166	INSERT

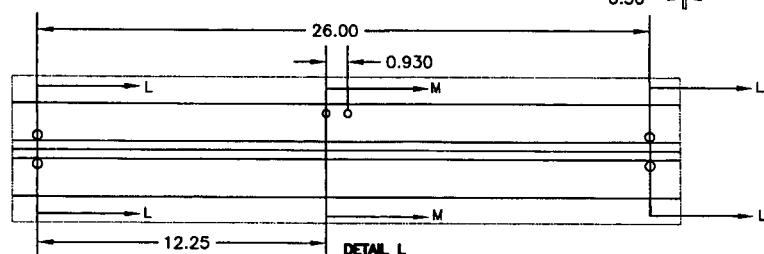
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DATE 06.04.25 TITLE 412 FLOAT SKIDTUBE SHEET 2 OF 5
SCALE 1:10



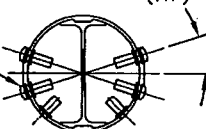
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06-45-0

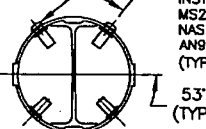


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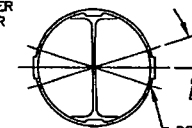
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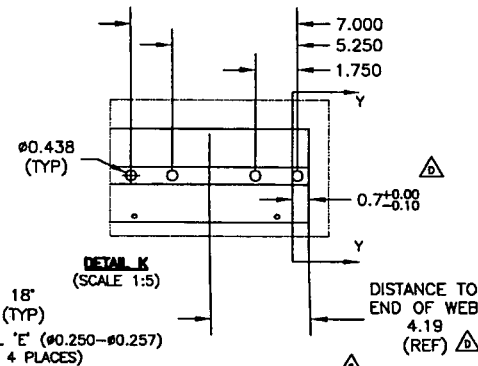
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SECTION M-M
(SCALE 1:4)



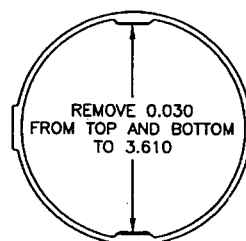
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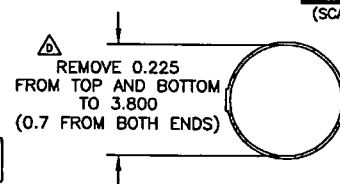
DETAIL K
(SCALE 1:5)

DISTANCE TO
END OF WEB
— 4.19
(REF) 

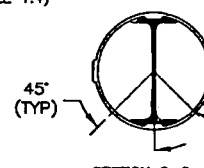
QTY - Q13	QTY - Q23	PART NUMBER	DESCRIPTION
X		D3391-013	MID TUBE ASSEMBLY
	X	D3391-023	MID TUBE ASSEMBLY
1	1	D2500-1-100	EXTRUSION
1	1	D3389-1	WEB
24	20	NAS1330C3KB116	INSERT
24	10	NAS1330C3KB106	INSERT
4		NAS1329C4KB140	INSERT
4		NAS1615H3L	WASHER
4		AN960C10L	WASHER
4		NAS1615H4L	WASHER
4		AN960C416L	WASHER
4		MS27039C1-09	SCREW
4		MS27039C4-08	SCREW



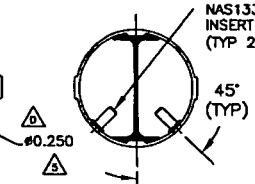
SECTION X-X
(SCALE 1:2)



SECTION Y-Y
(SCALE 1:4)



SECTION 9-4
(SCALE 1:4)



SECTION H-H
(SCALE 1:4)

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APPROVED

DART DART AEROSPACE USA, INC.
PORTLAND, OREGON 97208

DRAWING NO
D3391

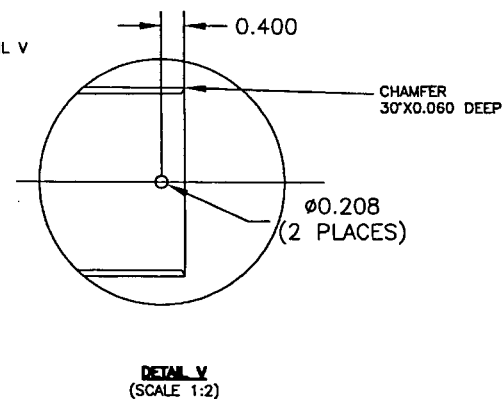
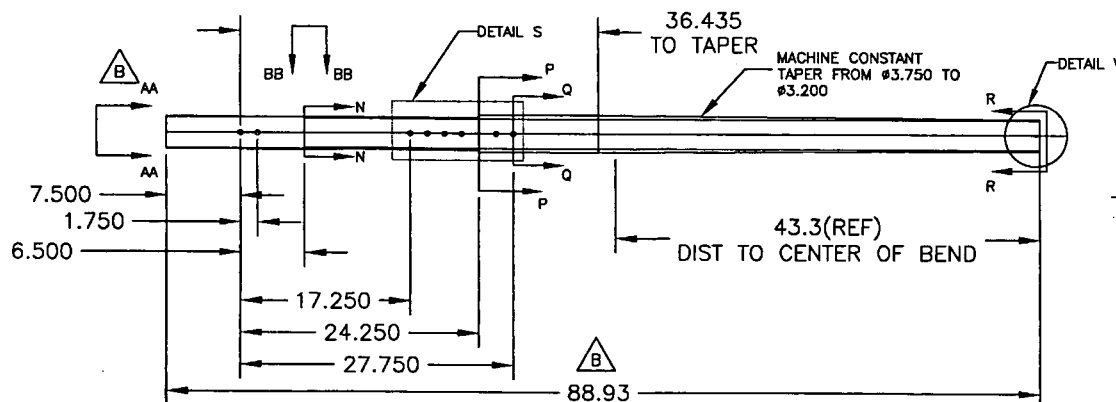
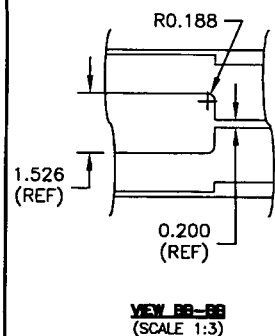
REV. 1

SHEET 3 OF 5

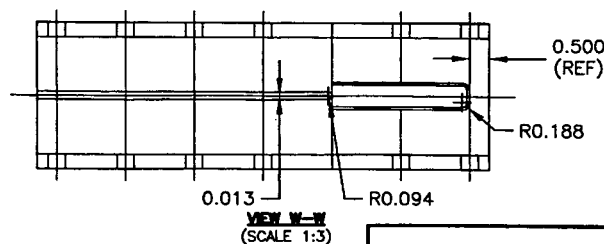
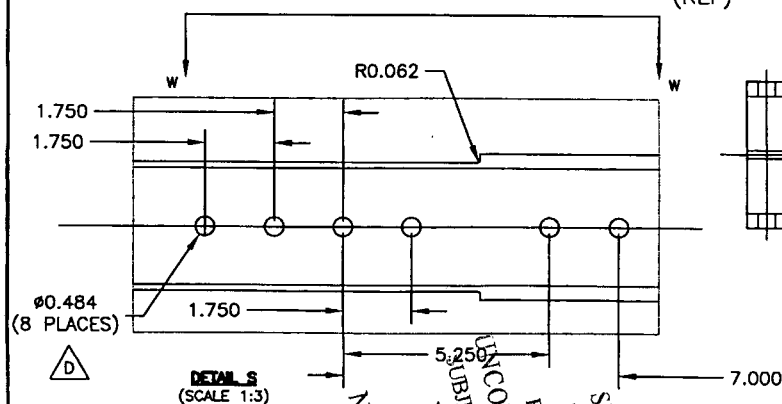
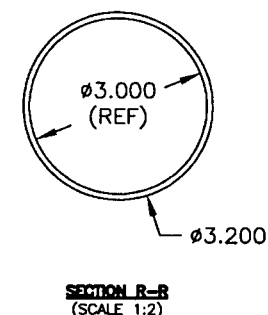
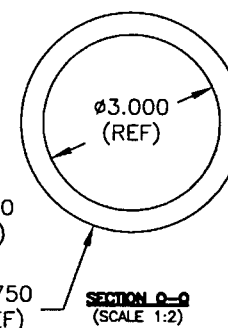
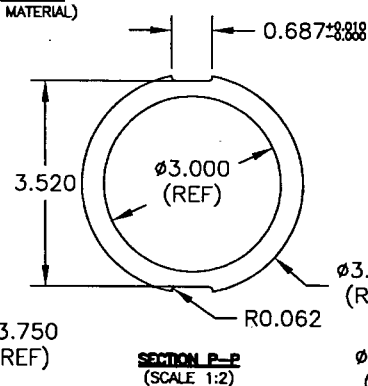
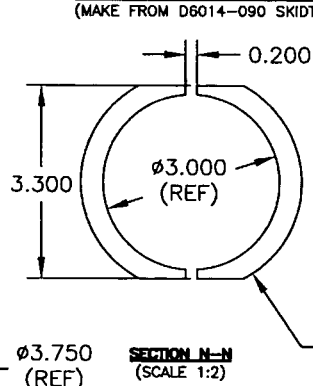
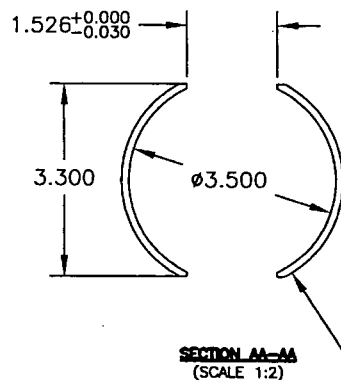
DATE
06.04.25

TITLE	412 FLOAT SKIDTUBE
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SCALE



D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



RELEASED

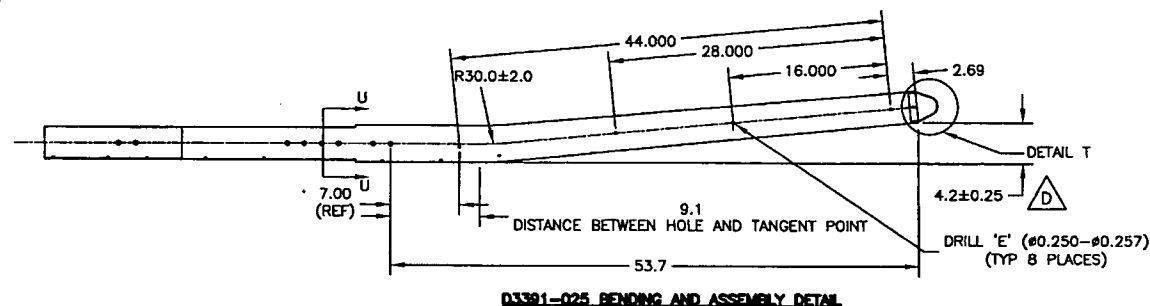
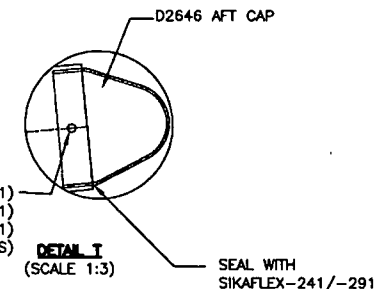
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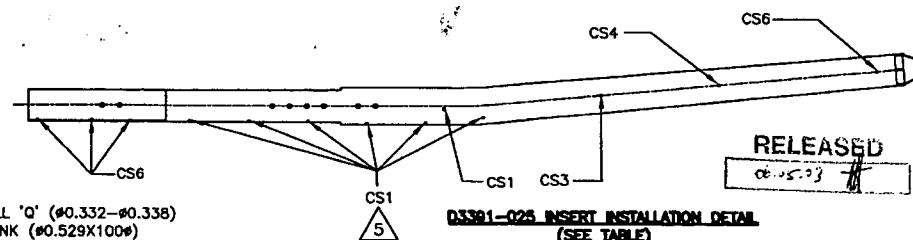
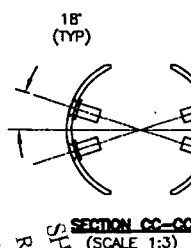
DESIGN	PH	DRAWN BY	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, MA	REV. E
CHECKED	PH	APPROVED	PH	DRAWING NO. D3391	SHEET 4 OF 5
DATE	06.04.25	TITLE	412 FLOAT SKIDTUBE	SCALE	1:12

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HC'S MARKED	QTY D3581-315	CTY D3391-026	C'SINK	P'N
C51	18	14	Ø.425	AESS10KB396
C52	4		Ø.501	AESS10KB396
C53	4	2	Ø.291	NA51330C3KE316
C54	4	2	Ø.291	NA51330C3KE266
C55	4		Ø.291	NA51330C3KE216
C56	12	8	Ø.291	NA51330C3KE166

QTY - 01s	QTY - 02s	PART NUMBER	DESCRIPTION
X		D3361-015	AFT TUBE ASSEMBLY
	X	D3361-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
18	14	AESS10KB386	INSERT
4	2	NA51330C3KB318	INSERT
4	2	NA51330C3KB268	INSERT
4		NA51330C3KB215	INSERT
12	8	NA51330C3KB165	INSERT
4		NA51330C4KB151	INSERT
2	2	AN3C4A	BOLT
2	2	NA51515H3L	WASHER
2	2	AN980C10L	WASHER



DRILL 'Q' (#0.332-#0.338)
C'SINK (#0.529X100#)
NAS1330C4KB151 INSERT (1)
(4 PLACES)

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DART DART AEROSPACE USA, INC.
8001 WARD DRIVE, WILSON, NC 27157

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